

APPENDIX OF NEW CLAIMS

29 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein said insert parts each include a resilient element connected at one end to one end of another resilient element of another insert part, the resilient element being connected at another end to an oblique part configured to extend obliquely into the attachment channel of a side member;

wherein when said insert parts are inserted in an attachment channel, a first side of the oblique part is arranged to be in register with a locking device disposed along an outer surface of the attachment channel and a second side of the oblique part is arranged to be disposed along an inner surface of the attachment channel thereby placing the respective resilient member in tension when inserted into the attachment channel;

wherein the second side of the oblique part is arranged to extend along an attachment channel to a predetermined point located further away from the connecting end of the insert part than the first side of the oblique part;

wherein the resilient members are arranged to be positioned along the inner surface of an attachment channel;

wherein the insert parts generally define the shape of an arrow point directed along a longitudinal axis of an attachment channel; and

wherein the corner piece includes a plurality of deformable positioning elements extending generally from a region where the connecting ends of the insert parts join.

30 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein each of the insert parts includes a locking element having a plurality of notches disposed at one end thereof, said locking element arranged to abut a locking device defined along an outer surface of the attachment channel;

wherein said locking device is a deformable protrusion extending at a predetermined angle from the outer surface of the attachment channel, the deformable protrusion being deformable by the locking element; and

wherein the deformable protrusion is selected such that it is sufficiently large so as to compensate for production tolerances, lacquer thicknesses and have a working force on the corner joint that can only be increased by enlarging a deposit surface.

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31 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner joint is provided with locking means comprising of upset material parts in the shape of lips made by means of slantingly pressed-in parts of the side members which cooperate with notches defined on the corner piece;

wherein the insert pieces further include at least one notch, said notches having at least one of the following characteristics:

a triangular shape;

a triangular shape defined by one side against which the lip is positioned is longer than another side over which a free end of the lip is pressed in;

a shape of a predominantly right-angled triangle, wherein the relation between one side against which the lip is situated and another side over which a free end of the lip is pressed in is variable by the compression characteristics of the material of the side members;

one side of the notches over which a free end of the lip is pressed in has a concave bent and/or buckled shape;

one side of the notches over which a free end of the lip is pressed in, on the place where the free end of the pressed-in lip makes contact with the one side extends perpendicular or almost perpendicular to the longitudinal direction of the pressed-in lip; and

the notches have a depth of 3 to 4 mm.

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32 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner joint includes locking means including at least one upset material part in the shape of a lip that is made by means of slantingly pressed-in parts of the attachment channels of the side members, the insert parts including at least one stop part arranged to press the lip; and

wherein said lip includes a contact surface disposed at one end thereof which is arranged to cooperate with a contact side of the insert part.

33 (New Claim). The corner joint according to claim 32, wherein the stop parts have at least one of the following characteristics:

the stop parts extend in a direction of the deflection of the lip;

the stop parts are substantially detached from the body of the corner piece;

the stop parts are only connected to the corner part at their base;

the insert piece has a framed structure and the stop parts are made thicker than the surrounding parts of the framed structure and/or are made equally thick as the total length of the pressed-in lip;

the insert parts of the corner piece are provided with a recess arranged to store any possible material that has been scraped off during the pressing of the lips;

the stop parts include a serrated relief along a surface against which the lip is pressed, the stop parts having a shape such that the formation of any possible cavities under the pressed-in lips are minimized;

the stop parts include a stop surface which is inclined in relation to the longitudinal direction of the accompanying side member and equivalent to the inclination of the pressed-in lip.

34 (New Claim). The corner joint according to claim 31, wherein a filling compound is provided on the place of the pressed-in lips wherein:

the filling compound is either provided under the lip so as to fill any cavities under the lip;

or the filling compound is provided in the passages around the lip so as to be sealed off;

or the filling compound is provided on the pressed-in lip so as to entirely

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fill up the notch;

or the filling compound provides for a combination of the above-mentioned functions.

35 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein before an insert part is placed in an attachment channel of a respective side member, a filling compound is provided in the attachment channel.

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36 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein at least one of the insert parts includes a locking part arranged to extend near a first side of an attachment channel and an inclined part extending inclined relative to both a longitudinal axis of the attachment channel and the locking part, said inclined part extending along the attachment channel to a predetermined point located further away from the connecting end of the insert part than the locking part; and

wherein the inclined part defines a leg that extends to connect with another leg connecting to the locking part.

37 (New Claim). A corner joint according to claim 36, wherein a panel is retained by the frame members by a plurality of wedges in register with a center portion of the inclined part.

38 (New Claim). A corner joint according to claim 36, wherein a panel is retained by the frame members by a plurality of wedges in register with the inclined part, the inclined part directed such that an intersection of an extension thereof with an edge of a panel is situated a distance near 10 cm from a corner of the panel.

39 (New Claim). A corner joint according to claim 36, wherein the locking part includes lips arranged to be pressed in a slanting direction relative to the longitudinal axis of an attachment channel, said lips having at least one of the following characteristics:

a free end of each lip being situated behind a central axis of a respective inclined part; and

each lip positioned in a direction which is slightly buckled inward in relation to the central axis of a respective inclined part.

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40 (New Claim). A corner joint according to claim 36, wherein the inclined part generally forms a triangle with a second leg that extends against a second side of the attachment channel and a third leg that links to the second leg and the inclined part.

41 (New Claim). A corner joint according to claim 32, wherein said insert parts each include a resilient element connected at one end to one end of a resilient element of the corresponding insert part.

42 (New Claim). A corner joint according to claim 36, wherein said insert parts each include a resilient element connected at one end to one end of a resilient element of the corresponding insert part;

wherein each of said resilient elements are connected at another end to an oblique part configured to extend obliquely into the attachment channel and abut an inner surface of the attachment channel, whereby pressure created by the oblique part abutting the attachment channel places the resilient member in tension.

43 (New Claim). A corner joint according to claim 42, wherein the resilient

elements are arranged to be positioned generally along the inner surface of the attachment channel.

44 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner piece and an outer surface of the attachment channels are arranged such that there are no parallel surfaces corresponding to one another with the exception of interlocking zones configured to interlock the corner piece and attachment channels.

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45 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein each insert part includes a leg extending from the one end of the insert part and arranged to extend into an attachment channel along an inner surface thereof, said insert part including a locking part arranged to lock with an outer surface of the attachment channel; and

wherein a clearance is defined between the outer surface of the attachment channel and the insert part when the corner part is inserted into at least one attachment channel, the clearance generally extending from the locking part to at least the connecting end of the insert part.

46 (New Claim). A corner joint for joining two frame side members having

attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner piece is provided with positioning elements arranged to guide the insert parts into the attachment channels when positioned therein; and

wherein the positioning elements include at least one of the following elements:

elastic press-on elements provided to push the inner sides of the insert parts against an inner surface of the attachment channels;

elastically bendable flaps provided on the insert parts at a predetermined distance from the connecting ends thereof and arranged to cooperate with the outer surface of the attachment channels;

support and guiding elements provided on the corner part in the shape of a little leg having elastically bendable flaps arranged to cooperate with the outer surface of the attachment channels.

47 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner piece includes a clearance generally defined at an inside corner where the insert parts connect, whereby said clearance makes it possible to push away any burrs which may be present on the side members.

48 (New Claim). A corner joint according to claim 29, wherein the insert parts

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connect to form a unitary corner piece.

49 (New Claim). A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the connecting ends of the insert parts are connected with a hinge.

50 (New Claim). A corner joint according to claim 49, wherein each insert part includes a hook-shaped protrusion defined at the connecting end thereof, the hook-shaped protrusion arranged to pivotably connect to a hook-shaped protrusion of another one of said insert parts.

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51 (New Claim). A corner piece having two insert parts each arranged to connect at a connecting end to another insert part at a predetermined angle, each insert part configured and dimensioned to be received by an attachment channel of a side member, each insert part comprising;

a locking part extending from one side of the insert part;

an inclined part extending from the insert part at an incline relative to the locking part, said inclined part arranged to extend further in length from the connecting end than the locking part;

wherein the inclined part defines a leg that extends to connect with another leg connecting to the locking part.

52 (New Claim). A method for forming a corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two extending insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured

and dimensioned to be received by the mitered end portions of a respective one of said attachment channels of said side members, the method including at least one of the following steps:

forming the side members to a predetermined shape arranged to be connected by the corner piece, said side members being formed before and/or after the end portions thereof are miter sawn;

forming the side members to a predetermined shape to include bent lips directed at an incline towards a longitudinal axis of the attachment channels; and

forming the side members to a predetermined shape to include bent lips directed at an incline towards a longitudinal axis of the attachment channels, the lips being pressed and secured by pressing knives;

forming the side members to a predetermined shape to include bent lips directed at an incline towards a longitudinal axis of the attachments channels and applying a filling compound in a notch formed by the bent lips along an outer surface of the attachment channel in an amount that it is at least partially displaced when the lip is pressed towards the notch.

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